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EXAMINER

VANORE, DAVID A

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/669,186
Filing Date: September 24, 2003
Appellant(s): BENVENISTE, VICTOR M.

Thomas G. Eschweiler
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 4, 2008 appealing from the Office action mailed June 20, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,554,857	Benveniste	09-1996
3,711,706	Davis	1-1973
4,315,153	Vahrenkamp	2-1982

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The rejection of claims 1, 21, and 29 as set forth below is subject to appeal.

Claims 1, 21, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable in view of Benveniste. (USPN 5,554,857) in view of Davis (USPN 3,711,706) with Vahrenkamp (USPN 4,315,153) cited as showing the advantage imparted by using Permanent Magnets.

Regarding claims 1, 21, 26, and 29, Benveniste teaches a ribbon ion beam implantation system comprising an ion source (Item 18), an extraction system (24) for extracting desired ions from a source, and a mass analyzer comprising

magnets (110 and 112) to select an ion species. The magnets of Benveniste comprise ferromagnetic pole pieces and coils, i.e. electromagnets.

Benveniste fails to teach or suggest the use of a permanent magnet in place of an electromagnet.

Davis teaches the use of permanent magnets to separate charged particles (Col. 2) without creating an electric field in a beam path.

Modifying the Benveniste apparatus to utilize a permanent magnet as opposed to an electromagnet alter the source of the magnetic field, but not the critical function of the field in the controlled deflection of ions passing through said field.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a permanent magnet instead of an electromagnet because a permanent magnet produces a constant magnetic field without causing undesired pole piece heating as in an electromagnet. The use of a permanent magnet or electromagnet is not critical in the practice of the Benveniste invention. The critical aspect of the magnet used is the field that is produced. An electromagnet enables a variable or controllable magnetic field of varying strength to be created. Further, an electromagnet may be turned off.

Vahrenkamp further shows that advantageously the use of permanent magnets to separate charged particles reduces cost (Note Col. 3).

(10) Response to Argument

Appellant's arguments at pages 3-4 of the Appeal Brief are directed towards the combination of the Benveniste and Davis references. The position taken by Appellant is that modifying Benveniste using Davis would make the Benveniste invention unsatisfactory for its intended purpose.

The Appellant sets forth that such intended purpose is to provide flexibility, note page 4, paragraph 3 of the Appeal Brief. However, the field of the invention disclosed in Benveniste "concerns a method and apparatus for controlling ion beam generation in an ion beam implanter and, more particularly, to a method for using a magnetic field that adjusts the contents of the ion beam to remove unwanted ion species from the ion beam." (Col. 1 Lines 6-11 of Benveniste). Though Benveniste may have as an advantageous feature this flexibility cited by Appellant, the position of the examiner is that the intended purpose of Benveniste is succinctly set forth in the field of invention of Benveniste and that a combination with Davis would not make Benveniste unsatisfactory for such purpose because a combination would not remove the mentioned magnet or magnetic field, but rather modify the element which produces such a field.

Therefore, the argument presented against the combination of Benveniste and Davis is not persuasive.

The Appellant further argues at page 4-5 of the Appeal Brief that the motivation to utilize a permanent magnet pointed out by the Examiner in Vahrenkamp is not proper because the primary functionality of Vahrenkamp is not employed in Benveniste. This argument is not persuasive.

The Vahrenkamp reference was not relied upon to make a combination of device elements, but was cited by the Examiner to demonstrate that in the prior art, there is a motivation to utilize a permanent magnet in the field of the separation of charged particles, and that the use of such a magnet has advantages that would be recognized by one of ordinary skill when evaluating the prior art as a whole.

When considering the Benveniste and Davis references, one of ordinary skill would, in reading Vahrenkamp, note the mention of reduced cost and complexity when employing a permanent magnet and recognize this as a source of motivation to employ a permanent magnet. The primary function of Vahrenkamp weighed against the combination of Benveniste and Davis may differ. However, it is important to note that Vahrenkamp was relied upon to show an explicit motivation for using a permanent magnet which was pointed out in the rejection

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of the claims, not to combine the device of Vahrenkamp with the Benveniste device.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

David A. Vanore

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